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# thern Forestry Notes



FOREST SERVICE, U. S. DEPARTMENT OF AGRICULTURE

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## FOREST RESOURCES IN THE OUACHITAS

The Ouachita Mountain region of Arkansas has more pine but less hardwood timber than in 1951, according to the recently completed third Forest Survey.

The current softwood growing stock of 1.5 billion cubic feet (which includes sound, well-formed trees at least 5.0 inches in diameter) represents a 39-percent increase since the second survey of 1951. Hardwood growing stock is 0.6 billion cubic feet: about 16 percent less than in 1951.

Of the 7.1 billion board feet of sawtimber (International 1/4-inch rule) tallied on the new survey, 5.9 billion is softwood. The volume of softwood sawtimber increased 44 percent since 1951. Hardwood sawtimber dropped 37 percent.

Commercial forest land in the Ouachitas now totals 3.6 million acres--74 percent of total land area. The present acreage of forest land is 5 percent greater than at the time of the previous survey.

Upon completion of the current Statewide inventory, a comprehensive report on Arkansas forests will be issued. A summary of preliminary county data on forest acreage and timber volume for the 10 counties of the Ouachita region is now available upon request. --H.S. Sternitzke.

## SOIL COVERS IMPROVE AIR-DRYING OF RED OAK

Soil covers under the lumber stacks halved losses of FAS grades in a recent air-drying test with 5/4 red oak.

When roll roofing was used to cover the ground under conventional lumber stacks, losses of FAS by shrinkage and de-grade averaged 16 percent. Without soil covers the average loss was 37 percent.

Testing was done in the spring and early summer of 1959 at McMinnville, Tennessee, in cooperation with the Walker Lumber Company. A more rigorous study will be made at the same location during the winter of 1959-60.--*Clayton Wray*, University of the South; and *Arnold L. Mignery*.

## LOBLOLLY AND SLASH PINES MAKE GOOD GROWTH

An alternate 3-row mixture of planted loblolly and slash pines on the Alexander State Forest near Woodworth, Louisiana, has demonstrated that the two species grow about equally well on moist, well-drained pine sites in central Louisiana. Dominant and codominant trees of both species measured 69 feet in total height at age 28. Loblolly of merchantable size averaged larger in diameter than slash--11.0 as against 10.1 inches--but slash pine had developed 13 percent more clear length than loblolly.

The plantation has produced 42.4 standard cords of merchantable pulpwood per acre, or a mean annual growth of 1.5 cords per acre. About 57 percent of the growth has been on loblolly and 43 percent on slash pine. The difference is attributed to higher loblolly survival. Both species had been planted at a spacing of 6 feet in rows 8 feet apart. When the first thinning was made at age 23, stocking averaged 155 loblolly and 134 slash trees larger than 3.5 inches d.b.h. per acre. The seedlings were of Louisiana origin: slash stock was from seed collected near Slidell, and loblolly was from seed produced in the northern part of the State.

With medium thinning, the two species grew at similar rates during the 5-year period 1952 to 1957. Net periodic volume growth of the plantation averaged 1.8 cords per acre per year, and an additional 0.2 cord per acre per year died.

In this plantation, difference in tolerance has not been important. Nevertheless, mixtures of loblolly and slash pine, if planted at all, should alternate species in bands wider than 3 rows so as to minimize the edge-effect when one species outgrows and suppresses its less vigorous neighbor.--*Eugene Shoulders*.

## FURROWING INCREASES FIRST-YEAR SURVIVAL OF PLANTED PINE IN TEXAS

During a year of occasional droughts, planting loblolly pine in furrows improved seedling survivals in the Coastal Plain of Texas.

On an abandoned pasture with a heavy cover of Bermuda grass and weeds, survival and growth of 1-0 loblolly seedlings were compared on furrowed and unfurrowed rows. Furrows averaged 12 inches wide and 3 inches deep; they were made with a tractor-drawn middlebuster.

Seedlings were bar-planted in February 1958. An average of 81 percent were living in April, with no notable differences between furrowed and unfurrowed rows. By October, 54 percent of the seedlings on the furrows were still alive. This was a very significantly higher proportion than the 31 percent on untreated rows, although heights were quite similar.

April to September rainfall totaled 50 percent above normal, but three droughts, one of 27 days and 2 of 36 days, probably accounted for most of the mortality.

The survival on the furrows is not deemed satisfactory, though it is preferable to that on untreated rows. In the same general area, survival on completely denuded plots in droughty years has been close to 100 percent. Wider furrows might approach this goal.--*E.R. Ferguson.*

### 2, 4, 5-T EFFECTIVE FROM HELICOPTER

Helicopter application of a solution of diesel oil and iso-octyl ester of 2,4,5-T to a low-grade hardwood stand on Tennessee's Cumberland Plateau reduced total crown coverage by 67 percent after two growing seasons. Where water was used as the diluent, 42 percent of the area was released from canopy competition. Neither mixture harmed scattered native pines.

These are second-year observations on a 600-acre tract belonging to the Hiwassee Land Company. Both water and oil dilutions were applied in June 1957; each consisted of 60 pounds of acid per hundred gallons of total mixture. Approximately 1.8 pounds of acid were applied per acre.

The oil solution was superior in killing hardwoods of all species and sizes. It produced smaller droplets which more readily penetrated the overstory canopy and effectively reached the brushy understory.--*T.A. Harrington.*

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\*Copies are available at the Southern Station